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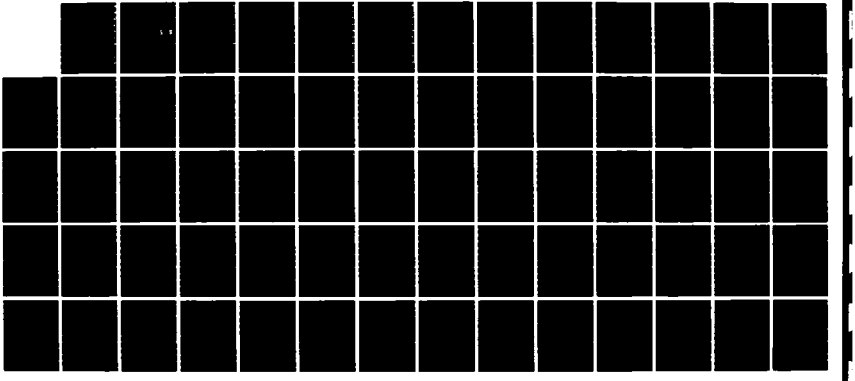

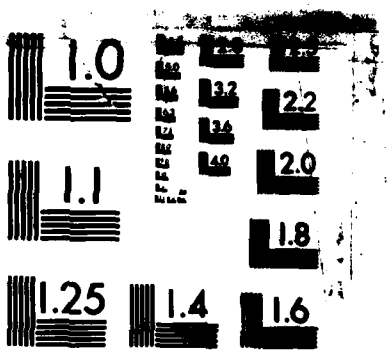


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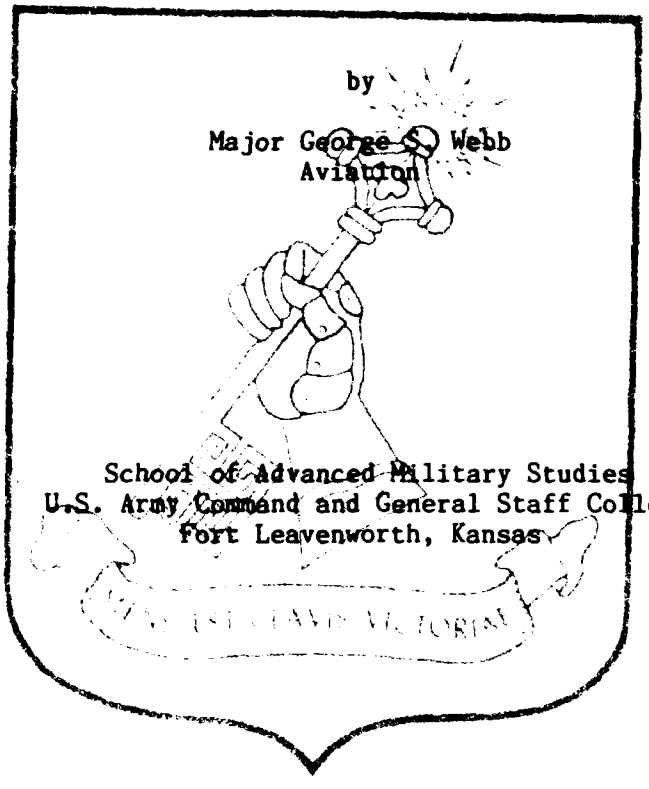
# The Flashing Sword of Vengeance: The Force-Oriented Counterattack from a Historical Perspective with Implications for the AirLand Battle and Combat Aviation

by

Major George S. Webb
Aviation



School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

2 December 1985

UNCLASSIFIED
SECURITY CLASSIFICATION OF THIS PAGE

ADA 167760

# REPORT DOCUMENTATION PAGE

| | |
|---|---|
| 1a. REPORT SECURITY CLASSIFICATION<br>UNCLASSIFIED | 1b. RESTRICTIVE MARKINGS |
| 2a. SECURITY CLASSIFICATION AUTHORITY | 3. DISTRIBUTION/AVAILABILITY OF REPORT<br>Approved for public release; distribution is unlimited. |
| 2b. DECLASSIFICATION/DOWNGRADING SCHEDULE | |
| 4. PERFORMING ORGANIZATION REPORT NUMBER(S)<br>School of Advanced Military Studies | 5. MONITORING ORGANIZATION REPORT NUMBER(S) |
| 6a. NAME OF PERFORMING ORGANIZATION<br>US Army Command and General Staff College | 6b. OFFICE SYMBOL (If applicable)<br>ATZL-~~SWD GD~~ SAV |
| 6c. ADDRESS (City, State, and ZIP Code)<br>Ft Leavenworth, KS 66027 | 7a. NAME OF MONITORING ORGANIZATION |
| 8a. NAME OF FUNDING/SPONSORING ORGANIZATION | 8b. OFFICE SYMBOL (If applicable) |
| 8c. ADDRESS (City, State, and ZIP Code) | 9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER |
| | 10. SOURCE OF FUNDING NUMBERS<br>PROGRAM ELEMENT NO. / PROJECT NO. / TASK NO. / WORK UNIT ACCESSION NO. |

11. TITLE (Include Security Classification)
The Flashing Sword of Vengeance: The Force-Oriented Counterattack from a Historical Perspective with Implications for the Air and Battle and Combat Aviation (unclassified)

12. PERSONAL AUTHOR(S)
Webb, George Sidney, Major, U.S. Army

| 13a. TYPE OF REPORT | 13b. TIME COVERED | 14. DATE OF REPORT (Year, Month, Day) | 15. PAGE COUNT |
|---|---|---|---|
| Monograph | FROM ____ TO ____ | 1985 December 12 | 67 |

16. SUPPLEMENTARY NOTATION

| 17. COSATI CODES | | | 18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) |
|---|---|---|---|
| FIELD | GROUP | SUB-GROUP | Counterattack; defensive-offensive; tactics; defense; mobility; agility; aviation; military history |
| | | | |
| | | | |

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

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The author concludes that there are four constants present in all force-oriented counterattacks:

(1) The counterattack must capitalize upon some error or inherent weakness brought about by the enemy's attack posture.

(2) Timing is a crucial component of successful counterattacks.

(3) Counterattacks manifest Sun-Tzu's cheng-ch'i relationship in which there is a strong, fixed component around which a more mobile force maneuvers.

| 20. DISTRIBUTION/AVAILABILITY OF ABSTRACT | 21. ABSTRACT SECURITY CLASSIFICATION |
|---|---|
| ☒ UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☐ DTIC USERS | UNCLASSIFIED |
| 22a. NAME OF RESPONSIBLE INDIVIDUAL<br>MAJ George S. Webb | 22b. TELEPHONE (Include Area Code)<br>913-684-2345 |
| | 22c. OFFICE SYMBOL<br>ATZL-~~SWV~~ SAV |

DD FORM 1473, 84 MAR — 83 APR edition may be used until exhausted. All other editions are obsolete.

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UNCLASSIFIED

Block 19. (cont)

(4) The counterattack force must have a marked agility over other forces present. The key component of this agility is a significant mobility differential.

The cavalry, on horseback, has possessed the mobility differential enabling it to be a counterattack force throughout history. In World War I the horse was no longer surviveable and the counterattack waned. The Second World War brought the tank and a concommitant resurgence of mobility and counterattacks. Now, with the universal development of mechanized forces in all armies, the mobility differential required of a counterattack force can be found in combat aviation.

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School of Advanced Military Studies
Monograph Approval

Name of Student: Major George S. Webb
Title of Monograph: The Flashing Sword of Vengeance: The Force-Oriented Counterattack from a Historical Perspective with Implications for the AirLand Battle and Combat Aviation

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Accepted this 31st day of December 1985.

ABSTRACT

THE FLASHING SWORD OF VENGEANCE: THE FORCE-ORIENTED COUNTERATTACK WITH IMPLICATIONS FOR THE AIRLAND BATTLE AND COMBAT AVIATION, by Major George S. Webb, U.S. Army, 67 pages.

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It seems to me one of the greatest talents of a general is to know how to use...(the offense and defense)...and particularly to be able to take the initiative during the progress of a defensive war.(1)

Baron de Jomini, The Art of War

The whole art of war consists of a well-reasoned and extremely circumspect defensive, followed by rapid and audacious attack.(2)

Napoleon, Memoirs

# I. INTRODUCTION

## A. THE AIRLAND BATTLE DILEMMA

In the year 331 B.C., Alexander the Great of Macedonia found himself opposed by the Persian army of Darius in what history would record as the Battle of Arbela. Outnumbered ten to one and outflanked as well, Alexander prepared to fight a defensive battle, yet he executed a bold and rapid counterattack upon detecting a flaw in Darius' attack formation. When the fight was over, Alexander had lost 500 men; Persian losses have been estimated between 40,000 and 90,000.(3) Two millenia later, on the Iberian Peninsula, the Duke of Wellington met the French Marshal Marmont on the battlefield near Salamanca. Although outnumbered, Wellington saw the opportunity for a counterattack and ordered his cavalry forward. One historian writes of the French loss, "Forty thousand men, it is said, were defeated in forty minutes."(4) In a more current era, during the early years of World War II on the Eastern Front, the German army executed a series of brilliant counterattacks against a Russian force which routinely outnumbered them ten to one. Of his defense on the Chir River, General Balck, commanding the 11th Panzer Division, explained:

> The Russian attack "...cut through our thin defenses like a knife through butter. Then the attack would stop; the Russians didn't know what to do next. You had to wait for this moment and then counterattack them immediately. In the blink of an eye they'd be destroyed."(5)

As the U.S. Army embraces the doctrine of AirLand Battle in which the tactical role of the counterattack becomes increasingly critical to success, it is proper that we should examine this "counterattack business" for both its historical constants and its present application to warfare. Such is the purpose of this paper: to examine the role of the counterattack throughout the history of warfare; to extract from that examination those things which are constant; and to apply those constants to the doctrine of today and tomorrow. Within that framework, I have elected, for reasons of length as well as AirLand Battle relevance, to focus my study on the force-oriented (also called enemy-oriented) counterattack. Similarly, the focus of my conclusions will lean toward Army aviation for the conduct of the counterattack.

* * *

The most current (1985 draft) FM 100-5, Operations, the U.S. Army's capstone manual, makes liberal use of the terms counterattack, counterstroke,

counteroffensive, and spoiling attack. These terms may not be as clearly understood as expected, however. The U.S. Army, particularly during World War II, has tended to be more terrain-oriented than force-oriented, and similarly, it has tended to emphasize firepower over maneuver. During the Korean War, personnel and equipment shortages often resulted in a "two-unit" force structure (two companies to a battalion, two battalions to a regiment; etc) which hardly provided a reserve for counterattack. While the subsequent pentomic division of the mid 1950's, with a mobile defense designed to spread out and survive on the nuclear battlefield, offered the cellular structure, like hedgehogs, conducive to counterattacks and touted them in doctrinal literature, the command and control problems and reduced manpower which plagued the pentomic division precluded their execution. In the 1960's, the Army developed the ROAD (Reorganization Objectives Army Division) structure, offering a force-oriented doctrine emphasizing mobility, mechanization, area defense-in-depth, dispersion, and fluidity(6)--all of the ingredients for a doctrine embracing the counterattack.

Europe, however, was soon to fall to second place behind the counter-insurgency tactics overshadowing it in Vietnam. In one sense, in Vietnam..."the ground strategy remained that of a gigantic mobile defense"(7) and the air assault technique was reminiscent of a just-as-gigantic counterattack. Meanwhile, the business of counterattacks in the rest of the Army, particularly in Europe, stagnated. Jolted back into reality by the Arab-Israeli War of 1973, the Army generated the 1976 doctrine of Active Defense, wherein the just-witnessed dominance of anti-tank missiles became a fundamental part of the notion that the defense is the stronger form of war. Thus rejecting the force-oriented defense, Active Defense was a low-risk tactical doctrine which, although it advertised the counter-attack, scarcely had the tools with which to conduct it due to its positional orientation.

Having traced the recent history of the force-oriented counterattack in U.S. Army doctrine, it is not surprising that the 1982 AirLand Battle, force and maneuver oriented as it is, picks up the counterattack where many officers had never even left off. FM 100-5 advises, "When the balance of power on the battlefield changes, the commander can exploit the situation by counterattacking to seize the initiative," yet it is difficult for the non-theorist to conceptualize the intent behind these words.(8) It would probably be just as difficult to understand COL Vincent Esposito, West Point professor of military history, when he said in 1953, "A defensive-offensive, or counterattack, policy is regarded by

some military historians to be the strongest form of war."[9]

B. THE LESSONS OF TIME

Several factors appear to be consistent in successful counterattacks. These "historical constants" are:

1. First, timing is absolutely critical to the proper execution of the counterattack. It is critical because one's window of opportunity for capitalizing upon an enemy weakness is fleeting indeed. Timing is crucial because, in its simplest sense, one is attempting to wrest the initiative from a moving, thinking, reacting force.

2. Second, the successful counterattack is routinely marked by agility, "the ability of friendly forces to act faster than the enemy."[10] In most cases, this agility is achieved through what some call a mobility differential--the capacity for an armed force to move on the battlefield faster than its opponent. COL Creighton Abrams once wrote that mobility is composed of equipment, organization, communications, command structure or technique, and logistical organization, indicating that mobility is not simply a piece of equipment which moves quicker.[11] That mobility is most easily achieved, however, through a superior means of locomotion, and throughout the history of battle the counterattacking force is generally that element with a mobility differential: the cavalry or dragoons on horseback or on chariots, the armored or mechanized forces from the Great War onward, and hence aviation in the wars of today and tomorrow. Richard Simpkin, a noted British theorist, advises that "...rotor is to track as track is to boot," an observation even more complete if the horse were injected into his equation.[12] One must consider, then, the mobility differential (which is most easily observed) as a major component of agility, even though FM 100-5 explains that, "In the end, agility is as much a mental as a physical quality."[13]

3. Closely aligned with the notion of agility is Sun Tzu's concept of cheng and ch'i. The cheng is the orthodox force, the holding or fixing unit, the obvious; the ch'i, on the other hand, is the maneuvering, unorthodox element which attacks the enemy on his flanks and rear, the counterattacking force.[14] Said differently, ch'i maneuvers around that which is held in place by cheng in order to achieve decisive results. In a recent study, German General von Mellenthin claimed that infantry-minded officers generally want to hold ground, while armor-minded officers prefer mobility and open action. In response, U.S. General DePuy stated, "A judicious mixture of these complementary capabilities seems to shape the battlefield, maintain coherence, and create situations

in which the enemy can be destroyed."[15] The cheng and ch'i relationship is present in almost all successful counterattacks.

4. The fourth constant is the notion that a successful counterattack capitalizes upon some weakness or disadvantage inherent in the enemy's attack, either a mistake the enemy makes or simply a flaw in his offensive. The key, save for the desperation counterattack, is that the counterattacker had better determine what that weakness is (a center of gravity, perhaps) and make it a focal point of his plan.

5. Finally, in a future analysis, comes the concept of air mechanization. Another "theorist," German General Doctor von Senger und Etterlin, explains that in World War II the German army maneuvered on a two-tier structure: the foot and horse army which moved at 4 km per hour and the mechanized-motorized units which traveled at 20 km per hour. He attributes a great deal of the German success--especially on the Eastern Front and North Africa--to the ability of the Wehrmacht leaders to maneuver on these two tiers of mobility.[16] Today, he says, almost everyone in the army is motorized or mechanized.[17] "This state of affairs means that an army's mobility is basically uniform...As a result the commander in the field no longer has an element in his force which, although not large in terms of numbers, stands out from the rest in mobility and fighting power."[18] His answer to this dilemma is airmechanization, a force whose mobility differential offers an increase by a factor of ten. The tactic of the counterattack would be a great beneficiary of this increased mobility. But there is a trade-off, perhaps best stated by a British officer as he pondered this business of mobility on the eve of World War II:

> Mechanization is a means to move men and guns more swiftly--a headache-creating nuisance to the generals whose brains perforce must work more swiftly than of yore.[19]
>
> Norman MacMillan, 1938

## C. THE THEORETICAL FRAMEWORK

Let us look now at what one theorist of the military art says about the relationship between the defense and the offense. The defense, Carl von Clausewitz offers, is the stronger (or more effective) form of war, for the defender has the advantages of known terrain, time for preparation, popular support, and the preservation of energy through waiting.[20] Furthermore, the attacker has several disadvantages: he must stop to attack enemy forts or positions, he travels ever-deeper into hostile territory, his lines of communication become longer, the defender often receives exterior assistance, and the defender becomes increasingly tenacious as his danger increases.[21] To be sure, the attacker

has advantages as well, not the least of which is the ability to mass as he selects the time and place of his attack. Clausewitz summarizes the three factors of victory in the relationship between the defense and offense as surprise, the advantage of terrain, and concentric attack.(22) While the advantage each of these factors gives to the defense or offense will change with styles of war, it is clear nonetheless that as the attacker continues, he gradually becomes weaker until he reaches what Clausewitz calls his culminating point. At that moment he is advised to halt his attack and himself establish the defense, considering his attack done.

The problem, Clausewitz said, is that while the defense is the stronger form of war, one cannot achieve victory while on the defense. "To win thus necessitates an attack, either initially or in the form of a counter-attack from the defence," explains Roger Leonard. "The choice of the moment of counter-attack depends on 'discovering the culminating point by the fine act of judgment.'"(23) Clausewitz tells us that the "...defense in general is not an absolute state of waiting and repulse...it is permeated with more or less pronounced elements of the offensive (and that)...one cannot think of the defense without that necessary component of the concept, the counter-attack."(24) The beauty of the counterattack is that while the defender has the advantage of terrain, and the attacker has some advantage from surprise and concentric attack, the counterattacker benefits from all of these. In a force-oriented battle, "...we must not fail to emphasize that the violent resolution of the crisis, the wish to annihilate the enemy's forces, is the first born son of war."(25) Hence, Clausewitz tells us of the counterattack:

> A swift and vigorous transition to attack--the flashing sword of vengeance--is the most brilliant point of the defense. He who does not bear this in mind from the first...will never understand the superiority of the defensive."(26)

It is, indeed, the counterattack which requires initiative in the defense, opening the door to the offense which alone can produce decisive results.

D. THE DEFINITIONS

The Soviets begin their definition of a counterattack by calling it, "An attack undertaken by defending troops against at attacking enemy..."(27) Likewise, Army FM 101-5-1 begins with, "attack by fire or by fire and maneuver conducted in the course of defensive combat..."(28) Finally, both Jane's

Dictionary of Military Terms and JCS Pub 1 call it an "attack by part or all of a defending force against an enemy attacking force...."(29)(30) The critical part of the definition is that the force being counterattacked is itself conducting an attack and, hence, has certain weaknesses not normally characteristic of a defending force. It is vitally important to realize that the counterattack is not simply an attack.

All of the sources listed above complete their definitions by explaining the purposes of a counterattack: to regain lost terrain or positions, to destroy or cut off the attacking force, and to ease the pressure on a unit in contact. Jane's and JCS Pub 1 go a step further to state that the counterattack has "...the general objective of denying to the enemy the attainment of his purpose in attacking,"(31) at least suggesting that the counterattack has some sort of negative or restorative role.

A related term is the counteroffensive, the JCS Pub 1 definition of which is "...a large scale offensive undertaken by a defending force to seize the initiative from the attacking force."(32) The Soviets call the counteroffensive a "...transition from the defensive to a determined offensive for the purpose of putting to rout an attacking enemy who has been weakened in preceeding battles and thus deprived of the capability of developing his attack further."(33) Thus the counteroffensive connotes a more positive gain by taking advantage of the defeat that the counterattack has created.

There are two other terms related to the counterattack which, while they need no contrast, warrant being mentioned. A spoiling attack is "...a limited-objective attack made to delay, disrupt, or destroy the enemy's capability to launch an attack."(34) Hence deep battle, follow-on-forces-attack, and preemptive strikes are spoiling attacks. A defensive-offensive is a style of combat, in a broader, more deliberate sense, in which a defensive posture is maintained but during which numerous counterattacks are conducted.

Finally, having defined the counterattack, one must establish the various types. Of the souces reviewed on counterattacks, most distinguish between several types, but none list them all. As a result, though these categories are not mutually exclusive and often tend to overlap (a terrain-oriented counterattack is often also a local counterattack), it is easy to misinterpret literature on the subject unless precision is sought.

The most significant distinction is between the force (enemy) oriented counterattack and the terrain (position) oriented counterattack. The former is

an action aimed at the destruction (annihilation) of enemy troops and equipment with little concern for where they might be and is a key component of the mobile defense. The latter has its focus on regaining control of terrain; the removal (attrition) of enemy forces from that terrain is unimportant as long as the ground is reseized. This type of counterattack is fundamental to the positional defense.

A further distinction is made between deliberate and local counterattacks. The deliberate counterattack is normally well-planned and employs a reserve force, usually a task force or larger, specifically designed for the counterattack (the general reserves). It is normally accompanied by significant amounts of coordinated fire support and enjoys somewhat more time for preparation than the local counterattack. It is important to note that its failure may have dire consequences for the outcome of the larger battle.(35) The local counterattack, on the other hand, is conducted by non-reserve forces from a unit actively committed to the defense, in much the same way as the Active Defense shifted "uncommitted" battalions. Its relative time for planning equates to a hasty attack as distinguished from a deliberate attack. A local counterattack may also signify any counterattack conducted purely by forces of a subordinate unit within that unit's own sector. This type differs from the major counterattack in which one's own (or higher headquarters') reserves are used.

There is also the counterattack by fire (often an ambush intended to destroy enemy forces) as compared to the counterattack by fire and maneuver (during which some sort of assault is conducted in order to either completely destroy enemy forces or to regain lost terrain.)

Finally there is a distinction between a counterattack which is planned (as much as possible), one which is situational (not planned, but hastily executed once an opportunity is seen), and one which is born of desperation (when there appears to be no other recourse save utter defeat, a defensive culminating point).

Should this latter case arise, Clausewitz advises,

> ...then the tension of forces will, or should, be concentrated in one desperate blow. He who is hard pressed, expecting little help from things which promise none, will place his whole and last trust in the moral superiority which despair always gives the brave."(36)

## II. BACKGROUND

### A. THE HISTORY OF THE SWORD

This paper will not examine an exhaustive number of counterattacks. Rather, it will investigate a series of examples which permit an analysis through the changing styles and tools of war. The factors, or constants, which emerge serve as valuable measures to hold up to the final counterattack of this section, the one which failed in the Sinai in 1973.

* * *

#### 1. The Wars of Antiquity: Arbela and Cannae

The success of Alexander at the Battle of Arbela (also called the Battle of Gaugamela) in 331 B.C. (see Map A) had its roots in the Macedonian "professional" army as distinguished from the city-state militias of the time. It was formed of long-service regulars whose discipline and cohesion were key ingredients in the agility of an army that was to conquer the world. The army contained a light and heavy cavalry and executed the tactic of hammer and anvil attacks, the cavalry being the mobile hammer and the infantry phalanx providing the anvil upon which the enemy would be crushed. Thus when Alexander faced the Persian army of Darius, he had a Macedonian force that was well trained, well designed, and well led, allowing him to win a battle marked by counterattack and a "penetration of opportunity." As the battle lines were drawn, Alexander was outnumbered ten times over and well outflanked. His recourse was to draw in his forces on the left side to protect his flank, deepen his right wing, and then allow Darius to attack first. Alexander's archers and light infantry defeated the swiftly advancing Persian chariots, and then he observed a gap in the Persian line open up at the pivot point left when the chariots attacked. Alexander immediately formed a wedge to attack through this gap, a wedge composed primarily of the Companion Cavalry, an elite force considered the best heavy cavalry of the time, marked by discipline, skill, and tremendous mobility. At the very point of the wedge rode Alexander himself, for Alexander was accustomed to personally leading his cavalry. Finally, his hypaspists--light infantry--guarded the left flank of the wedge and maintained contact between the cavalry wedge and the heavy infantry phalanx.

A key factor in this battle was the ability of the heavy cavalry to close rapidly, maintaining such a shock effect that Darius simply could not react to blunt the attack. Alexander's cavalry caused the entire Persian army to panic and flee; when the pursuit was over Darius had lost 40,000 to 90,000 men to Alexander's 500.(1) And what were the factors leading to the Macedonian

victory? A force-oriented counterattack based on an enemy error, a mobility differential in well-trained cavalry maneuvering around a fixed base force, and precise timing and agility derived from a well-trained army and a leader positioned in the right place.

The Battle of Cannae a century later further demonstrated the power of a properly conceived and executed defensive-offensive (see Map B). The Carthaginian army of Hannibal met a Roman force under the command that day of Varro, a general known by Hannibal to be aggressive and capable of being lured into a trap. Outnumbered in every way but cavalry, Hannibal slowly withdrew the center of his line, causing Varro, who sensed victory, to pour more and more of his forces into that center. Once the center was so full of Romans that they could not fight, much less maneuver, Hannibal ordered his center to stop its withdrawal and to attack, directed his African infantry to turn and close in on both flanks, and had his cavalry, under his brother Hasdrubal, attack the Romans from the rear.

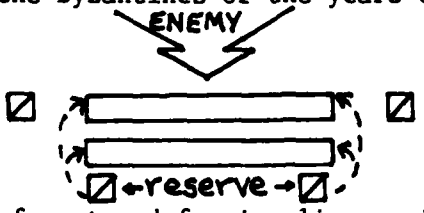
> The result was chaos in the Roman ranks. Massed so closely that they could scarcely use their weapons and attacked from all sides, the Romans were massacred. Some 60,000 of the original force of 72,000 died on the field of battle.(2)

The reasons for this victory were several. Again, it was a brilliant plan capitalizing upon an aggressive enemy leader who hastened to attack; Hannibal's use of the only element of his army in which he had superiority in quality and numbers--his cavalry; a marked agility in his force; and a leader capable of the most superb timing. The year was 216 B.C.

* * *

Time was marked by a Pax Romana after Scipio defeated Hannibal and began an era dominated by the Roman Legion. It was a period of prosperity and rare challenge--until even the legion was defeated (by the Gothic cavalry at Adrianople in 378 AD).(3) The cavalry had returned to battlefield where it flourished, particularly after the development of the stirrup in the fifth century A.D.

The counterattack, as a developed tactic, seemed to wane in this period, save for one army, that of the Byzantines of the years 600-1071 A.D.




The Byzantine tactic was to form two defensive lines, with a flank security, and to position two units of cavalry in the rear as a reserve and rear security

element. Should the two defensive lines fail to defeat the attacker, the reserve of fresh horse archers would counterattack, often creating a double envelopment. In the Dupuys' very detailed Encyclopedia of Military History from 3500 B.C. to the Present, the first mention of a counterattack doctrine was here with the Byzantines.(4)

2. The Wars of the Eighteenth and Nineteenth Centuries· de Saxe, Frederick, and Wellington

During the sixteen and seventeen hundreds, battles--if joined--were marked by a formality evident in the dictums of the emerging great masters. Not the least of these writer-generals was the Marshal de Saxe, a Frenchman who penned his Reveries on the Art of War in 1732. Greatly influenced by Czar Peter of Russia's defeat of the more powerful Charles XII of Sweden in the 1709 Battle of Poltava, de Saxe rejected, as a principle of defense, the absolute reliance on lines and entrenchments, for he felt they could always be ruptured by a resolute attacker, and a rupture leads to panic by the defender. He preferred a system of redoubts, or strongpoints, from which the attacker could be fired upon and disorganized. Further back would be more defending infantry to pick up the fight and, at the proper moment, cavalry would counterattack.

One of the finest examples of agility and deception in the course of a counterattack was demonstrated by Frederick the Great of Prussia in 1757 at the Battle of Rossbach (see Map C). This great captain brought to combat:

> two significant elements: speed and battlefield maneuver. The result was an instrument of war probably unsurpassed in technical military perfection for its time by any army save possibly that of Alexander of Macedon.(5)

Frederick, best known for achieving mobility through discipline, training, and his oblique order, was confronted by a French and Austrian allied army, under General Soubise, of double his strength. Once the battle lines were formed, Soubise was convinced to send his force around Frederick's left flank, a force which lazily advanced in three columns. Frederick, however, with excellent observation and military intelligence, quickly determined the Allied intentions and issued his orders at 2:30 PM. "By 3 PM, the camp was struck, the tents were loaded, and the troops had fallen in." So swift was the response that one French officer was to record "...it was like a change of scene in the Opera."(6)

Leaving part of his force in place at Rossbach so as not to alert Soubise, Frederick directed General Seydlitz to reposition 38 squadrons of cavalry, under

concealment, behind the Janus and Polzen hills (hugel), with his infantry and artillery soon to follow to the Janus hill. Soubise, finally detecting movement, was convinced that Frederick was retreating to cover his communications and thus hurried his movement, so much so that his forces had no time to adequately prepare. Indeed "...no instructions were issued where and when to deploy, nor were the soldiers relieved of their packs and camp kettles."(7) So rushed, confident, and complacent was the allied army that no advance guard or reconnaissance was employed and Soubise's cavalry reserve was brought forward to join the main force. Finally, as the rabble of the French columns approached the hills, Frederick counterattacked. Seydlitz's cavalry appeared dramatically from behind the Polzen, striking the allied army, which while still in column could not deploy, in the nose and along the right flank. Almost immediately appeared the Prussian artillery and infantry, hitting the allied columns on the nose and left flank. Soon Seydlitz's cavalry was striking the rear of the allied columns from Tagewerben.

It was 2:30 PM when Frederick issued his orders; by 4:30 PM the outcome was decided. In the event, the Prussians suffered 165 killed and 376 wounded, while the allies had 3000 killed and wounded and yielded 6000 prisoners.(8) Frederick the Great, master of mobility, had won a resounding victory by capitalizing upon the attacker's mistakes and executing his movement with the utmost of agility.

The Duke of Wellington, the British general who would defeat Napoleon at Waterloo, is considered by many to have been one of the masters of the defensive-offensive.

> ...awaiting his adversary on chosen ground, he fatigued his assailants with his artillery and a murderous fire of musketry, and when they were about to pierce his line, he avoided this formidable movement by falling on them with his united forces.(9)

In the year 1812, at the Battle of Salamanca, Wellington defeated the stronger French army of Marshal Marmont in one of the greatest counterattacks of history. The Frenchman left a gap in his line when he attacked.(10) In a flash of coup d'oeil*, Wellington saw this error, so dramatic to him that it was "...fixed with the stroke of a thunderbolt."(11) He directed his hidden cavalry to counterattack and won a resounding victory. In the final analysis, Wellington says all there is to say about coup d'oeil, mobility, and agility when he

*the commander's mental perception (intuition) of what is happening on the battlefield

writes, "How true it is that in all military operations, time is everything."(12)

3. The U.S. Civil War.

Across the Atlantic, new techniques were being developed in warfare, particularly with respect to the mobility of cavalry. In the War Between the States, it was the Confederate army which initially demonstrated the best use of cavalry, adhering to Nathan Bedford Forrest's admonition "get thar fustest with the mostest." The Union, on the other hand, employed its cavalry in a piecemealed, fragmented fashion with indecisive results.(13) By 1863, after Hooker's approval of a cavalry corps, the tide of mobility was to turn; with the advent of the Spencer carbine and Brigadier General James Wilson's appointment as the Chief of the Cavalry Bureau,

> The Union cavalry of over 270 regiments developed a new concept of mounted warfare, applicable to both strategic or tactical operations, that was characterized by the horsed mobility of cavalry and the rifled firepower of infantry combined with the flexibility of fighting either mounted or dismounted.(14)

The Civil War witnessed the transition of the cavalry mobility from Napoleonic, European shock action to that of a very different flavor. "By the war's end, it was established beyond question that the real purpose of the horse was to deliver firepower where it was needed most."(15) Just as surely, the US Army learned from the Confederacy that the cavalry was more than an escort and reconnaissance force; it was a combat force which had the ability to shift about rapidly on the battlefield. Generals Sheridan and Sherman were two who learned the lesson, and their decisive use of cavalry did much to bring the Confederacy to its knees.(16) But like the longbow at Agincourt, the weapons of the Civil War heralded the coming massive firepower--from the machine gun and artillery--which would rob the horse cavalry of its mobility during World War I.

4. The War to End All Wars

The stalemated trench warfare of World War I stifled the dramatic counterattack as it had been known. The firepower, the barbed wire, and the trenches all stole mobility from the battlefield, perhaps because the horse was no longer survivable. Nonetheless, as one observer recorded in 1917,

> once an (enemy) offensive has started the defense must remain passive until the time arrives for the counterattack. The counterattack is an elementary part of trench warfare.(17)

World War I was a war of position which produced terrain-oriented counter-attacks designed to regain as much lost ground as possible. The counterattack was ordered to eject the enemy from a position; destruction of the enemy was a consequence, not a raison d'etre. It was the Germans who fully developed the doctrine of defense marked by "...flexibility, decentralized control, and counterattack...", the latter being performed "...at every echelon to retake lost ground before the attacker could consolidate."(18)

The Germans modified their defensive doctrine during the course of the war because, simply stated, the massive artillery barrages of the era made survivability and retention of the forward trenches an unlikely proposition. Captain Tim Lupfer documents in his Leavenworth Paper how the German army, under the tutelage of General Ludendorff, analyzed, redesigned, and internalized a new defensive doctrine during the winter of 1916-17, a doctrine of elastic defense-in-depth built around the counterattack.(19) The system established a web defense of strongpoints, or hedge-hog pockets, reminiscent of de Saxe's redoubts, and a series of trenches or lines. The key was for the troops on the thin forward edge of the front to survive the artillery barrage. Once the attackers advanced through the forward positions and outran their own artillery, these soldiers would emerge and fire at the attacking allies, hitting them in their flanks and rear and disorganizing their assault. Now the German artillery, preplanned and observed, would immediately fall on the attackers. "Perhaps an advance is made to the second and third lines, but at some point almost certainly will come an intensive bombardment and an enemy counterattack. The Germans are extremely capable in delivering these attacks."(20) Finally, German shock troops, Stosstruppen, who were the "...best fighters--men of youth, daring, and vigor..." would counterattack to eject the allies before they could solidify a defense on their newly held objectives.(21)

The technique worked remarkably well. It had a counterattack system capitalizing upon an enemy attacker's weakness--outrunning his artillery. Agility was provided by planning, rehearsals, familiarity of terrain, and observed artillery. Additionally, the counterattack was controlled by the commander of the sector, regardless of rank, precluding any questions of responsibility, and the counterattack force was formed of the best German troops. Timing was important and was fostered by echeloned counterattacks: by squads on the outpost line, companies in the battle zone, battalions in the rear battle zone, and if needed, division sized units formed the field army reserves.(22) Finally, the whole system worked around a cheng/ch'i relation-

ship: forward pockets of resistance to hold and disorganize the attacker and storm troops to counterattack.

The war did not, however, see a tremendous mobility differential among ground forces. The horse fell victim to firepower, the tank--offering great promise as an offensive weapon--was still in its embryonic stages, and motorization was more of a logistical resource than a combat one. Nonetheless, the great thinkers of the interwar years would ultimately find their mobility-differential in the tank. Despite much thinking to the contrary, one officer in 1917 predicted,

> One should not allow himself to be hypnotized by trench warfare. War of movement alone can bring the decision. Besides, there will not always be wars of attrition and it would be false to consider that form of combat as that of the future.(23)

There were, to be sure, the Fullers, Pattons, and Liddell Harts who were apostles of mobility. But it was the German army of the interwar years, reduced to a skeleton force by the Versailles Treaty and freed from the shackles of outdated but on-hand equipment, which looked to mobility as a battlefield compensation for a lack of firepower. It was a German General Staff officer who reported of the tank during the Spanish Civil War in 1938,

> ...their battle tactics were therefore based on the mobility of this new weapon, not its firepower. The chief value of the tank lay in its ability to speed up the course of battle.(24)

It is also of note that one of the great fathers of Soviet military doctrine, Marshal Tukhachevskiy, wrote in 1931 that Liddell Hart was predicting a new era of dominant defense; the Russian thus spoke of "...the strange fact of creating motorized or mechanized units for use in supporting the defense by directing rapid fire upon threatened sectors and developing the counterattack more quickly."(25) Meanwhile the 1938 Cavalry Field Manual in the United States stated that cavalry, during the debut of mechanization, was,

> that combatant arm of the army organized to perform those missions of ground warfare that require great strategical or tactical mobility combined with firepower or shock.(26)

It is not surprising that the new tank force in America had been placed under the cavalry for development. As the tank replaced the horse, Brigadier General Adna Chaffee, chief of the newly established Armored Force, sounded distinctly like Tukhachevskiy when he declared in 1940,

> It uses its mobility to choose the most favorable direction for attack...Its defense is elastic and mobile and characterized by the counterattack.(27)

5. The Second World War

World War II brought mobility, in the form of the tank and its mechanized cousins, to the battlefield in a way never expected. There were, to be sure, the defenses of attrition with their position-oriented counterattacks: the Germans on the Western Front, the Japanese, the Russians, and even the Italians were noted for their inevitable counterattacks following any loss of ground. But it was the Germans, the true masters of mobility, who were to incorporate the tank into a flowing, force-oriented, decisive counterattack doctrine. In a sense, they took the elastic hedgehog defensive system they developed in World War I and mechanized it.

Major Ferdinand Miksche wrote a study in 1942 on the German tactics:

> Today, as in the furthest past, there are only two methods of dealing with an enemy's attack: defence and counter-attack. Defence repels the enemy by fire, counter-attack defeats him by movement.(28)

Nowhere were the Germans better at the latter than against the Russians on the Eastern Front during the first three years of that war. The Germans had the perfect target for the counterattack: an unsophisticated Russian force, still reeling from the leadership losses of the purges, which was pathologically rigid when compared with a German General Staff system which provided flexibility and agility of command to a mobile panzer corps. Additionally, the Eastern front provided wide-open maneuver terrain and a situation in which the Germans could yield ground with no political penalties save Hitler's. The German defensive plan was to hold fortified strongpoints with infantry units, and to position 75 mm assault guns (and sometimes the 88 mm AA guns) in an "...assembly area...sufficiently far from the friendly battle position to enable the assault-gun units to move speedily to that sector which is threatened with a break-through."(29) One German regulation stated,

> In defense, the most successful method of stopping a breakthrough of enemy mobile troops or tanks is the formation of mobile groups reinforced with anti-tank and close support weapons; they should be disposed in depth throughout the sector, particularly in localities vulnerable to tanks. These counterattack groups are to be held ready to attack the flank or rear of any enemy force which may break through and to cut off the enemy rearward communications."(30)

The American analysts, in 1943, summarized this doctrine;

> The Germans base their defensive tactics on the accepted principle that provision should be made for a heavy mobile reserve which will counterattack with the utmost available power as soon as the attack is seen to be thoroughly committed to its plan of operation. This is the Schwerpunkt principle in reverse.(31)

During the 17-day defense of the Chir River in December of 1942, General D. von Mellenthin (Chief of Staff of the 48th Panzerkorps) and General Hermann Balck (commanding the subordinate 11th Panzer Division) formed a team in which they became truly the masters of the sword of vengeance (see Map D). Characteristically, the two infantry divisions of the corps would hold forward positions along the river; when Russian penetrations occurred, von Mellenthin would transmit whatever information he had to Balck with directions to counter-attack with his division. The 11th Panzer Division, often with no more than 25-30 tanks, raced around the corps area, counterattacking Russian units. So adept was this team of Balck and von Mellenthin that the technique became known as "fire-brigade tactics," a major reason that 700 Russian tanks were destroyed in the Panzer Corps' sector during the 17-day fight.

During the Battle of State Farm, on 8 December, the 11th P.D. was ordered to counterattack the Russian 1st Armored Corps which had formed a bridgehead and was travelling south in the German rear (see Map E). As Balck knew that "...a frontal attack would merely push the enemy back and not lead to his destruction...," he decided to focus on the Russian flank; Panzer Regiment 110 hit the Russian corps on the nose and held it in place, while Panzer Regiment 15 and Panzergrenadier Regiment 111 slammed into the flank. "They hit the Russians at the very moment when they (Russian 1st Armored Corps) were about to advance against the rear of the 336th (German) Division, in the confident belief that the Germans were at their mercy." In the event, the Russians were totally surprised when the German panzers first hit the columns of Russian motorized infantry so that "...the panzers charged through the column throwing the Russians into the wildest panic." Then the counter-attack turned to hit the rear of the Corps and then its armor and artillery. In all, 53 Russian tanks were destroyed, a sizeable number for that part of the war.(32)

Another major action of the battle took place on 19 November. A new Russian force had crossed the Chir River and penetrated the German defenses. At 7 PM, von Mellenthin called Balck, who was already engaged in a fight, with his new instructions. Balck hesitated until the chief of staff told him, "Sir, this time it is a bit more than ticklish. The 11th Panzer division must move at once, every second counts." The division commander, now convinced of the urgency of the situation, delayed no further. He immediately broke contact

and raced through the night to be in position early the next morning. Typical of this action is the 15th Panzer Regiment which slipped in behind the first Russian echelon, turned, and followed it. The Russians thought the Germans were their own second echelon following behind and paid them no mind until the panzers struck, knocking out 42 Russian tanks. The 15th then hid and let the real Russian second echelon pass, and then wheeled behind it, destroying another 23 Russian tanks with still no losses to themselves.(33)

One reason Balck's counterattacks were successful was his target; he knew exactly why he would succeed. Of the Russian soldier, von Mellenthin says,

> ...when faced by surprise and unforeseen situations he is an easy prey to panic. Manstein proved...(at Kharkov)... that Russian mass attacks should be met by maneuver and not by rigid defense. The weakness of the Russian lies in his inability to face surprise; there he is most vulnerable.(34)

In a way, also, the Germans had learned that they really had no choice, they knew they must counterattack. von Mellenthin explains:

> If a bridgehead is forming or an advanced position is being established by the Russians, attack, attack at once, attack strongly. The situation will always be fatal. A delay of an hour may mean frustration, a delay of a few hours does mean frustration, a delay of a day means a major catastrophe. Resolute, energetic, and immediate action means success.(35)

Additionally, Balck was successful because of the mobility inherent in his panzerdivision, but more importantly, the agility with which he maneuvered it. He took full advantage of moving at night in order to surprise the Russians by being at precisely the right place in the morning. He and his subordinate commanders always fought forward, being in position to see, lead, and find the Schwerpunkt.(36) Balck never piecemealed his tanks to support infantry; rather, he always massed them for the counterattack. And finally, he exclusively issued verbal orders in the typical auftragestaktik (mission-orders) manner. He issued instructions to his regimental commanders at night so they could get about their business, and then he called 48 Panzerkorps for approval of his plan. If accepted, he merely called his regimental commanders to say "no change." If modifications were to be made, he personally went to each regiment during the night to explain the change.(37) In his ability to time the counterattack, no more need be said than this: General Balck "...was, and is, clearly a man of iron will and iron nerves."(38)

It would be appropriate, here, to clear up a potential misconception about the counterattack, particularly when one traces the role of cavalry--from Alexander forward--in its execution. Gen DePuy, a former TRADOC commander, made this caution during a 1980 tactical study with Balck and von Mellenthin:

> Many officers visualize a counterattack as a cavalry charge. However, in almost all seasoned armies the counterattacking force gains a favorable position on the flank from which to destroy the enemy tanks from stationary firing positions. Only after the enemy tanks are destroyed or have taken cover does the force close. In some cases the counterattack never closes.(39)

Indeed, the shock-type counterattack was replaced by the maneuver-to-fire counterattack during the US Civil War. Ultimately the Russians were to devise methods of thwarting the German counterattacks. By the end of 1942,

> Bitter experience was to teach the Russian that flanks must be protected until he finally made them so tank proof that they could only be overpowered with heavy casualties. For this reason the German flank attacks gradually lost their sting after 1943 and were more often repulsed.(40)

For one thing, the Russians began to use heavy tanks in their attacks and placed antitank (assault gun) brigades on the shoulders of the penetrations to repel the counterattack. Later in the war (1944-45) they began to use extensive minefields to protect their flanks as well. In one operation, to guard potential counterattack approaches, they laid 20,000 mines in one day; "German counterattacks ground to a halt and collapsed in minefields of that type."(41) Taking a lesson from their German foes, the Russians, who initially felt that defensive counterattacks were too difficult to perform given their limited command and control structure,(42) ultimately decided that in the defense, one of the main purposes of maneuver was to "...create prerequisites for successful counterattacks and counterblows."(43)

One can best, perhaps, sum up the German counterattack doctrine with the reflections of von Mellenthin:

> On the whole, the defensive battles in the Western Ukraine were successful because there was no rigid defense line, but an elastic one, which was allowed to bend but not to break. The junior commanders took advantage of every opportunity to counterattack, with the view of destroying as many Russians as possible. On the other hand a rigid defense system, like that of the 24th Corps east of Brussilov, usually broke to pieces in a very short time.... The secret of a successful defense depended on the dispositions of the reserves, and the weight and vigor of the counterattacks.(44)

The World War II experience was to demonstrate the mobility on the battlefield that was lost when the horse fell out in 1914. The tank, to be sure, was the key system which provided that mobility differential so necessary for the counterattack. But even the tank, with its mobility and firepower, was not always flexible, and it was to prove vulnerable to antitank systems. The US tank destroyer units and the assault gun units of other armies, forerunners of the AT missile systems of today, proved to be effective at plugging the gaps, but they, too, lacked the mobility differential of a strong counterattack force. The air forces and the airborne had mobility, but they were strategic assets. And army aviation was still too small a force to be a combat factor. In short, the mobility differential on the WW II battlefield was countered almost as quickly as it developed.(45)

6. The Yom Kippur War

In October, 1973, a combined Arab force attacked Israel on two fronts: on the Golan Heights from Syria and across the Suez Canal into the Sinai from Egypt. The tremendous lethality on the modern battlefield was such that "...whether defending or attacking, mobility and maneuver were paramount to success."(46)

The Israeli system of guarding the Suez had been to establish a series of observation strongpoints along what was called the Bar Lev outpost line. The operational plan was for the observers to provide early warning of a crossing and then slow it up while stronger forces came up from the rear. Meanwhile, the IDF would mobilize its national reserve to complete the defense.

The Egyptians capitalized upon speed, surprise, planning, and the Jewish holiday of Yom Kippur to make numerous successful crossings, capturing most of the Israeli outposts and eventually advancing several miles inward (to the east). The Israelis were reeling with shock and confusion, but rapidly pushing forces forward, when the armored division of General Bren Adan was ordered to counterattack on the 8th of October. (see Maps F and G)

The plan, overall, was for Adan's division, in the northern sector of the Southern Command, to turn left and counterattack southward into the flank of the Egyptian penetration while Major General Sharon's division "held the nose" of that penetration. The goals of the counterattack were the destruction of Egyptian forces in the Sinai, the relief of several outposts

still held by Israeli troops, and, ultimately, the seizure of Suez crossing sites for a counteroffensive into Egypt. Lieutenant General Salazar, Israeli Army Chief of Staff, personally briefed Adan, however, that due to the high number of enemy SAM and antitank missile systems on the Suez, he was not to counterattack along the canal but to move further inland, thus eliminating, for the time being, the second and third goals.(47) Adan's immediate superior, Major General Gonen, the commander of Southern Command, changed that guidance but a few hours (at night) before the counterattack, issuing vague orders which directed Adan to proceed along the canal. According to Adan,

> ...Gonen, although in real trouble, never stopped having optimistic hopes that were clearly unrealistic and irrelevant....He never stopped thinking about a (Suez) crossing operation and counterattacks. Every shred of positive information...fed his optimism.(48)

Furthermore, Gonen's new plan was not passed to all the division commanders. Nonetheless, the counterattack began the next morning with Adan's division deployed with two brigades forward and one in reserve, and it ran smack into an Egyptian force which was now in the process of establishing strong defensive positions. Indeed, it had been the Egyptian plan (born partially out of uncertainty) to cross the canal, stop along the Bar Lev line, then go into a hasty defense with extensive ATGM's and SAM's, and wait for the Israeli counterattack. They were not disappointed.(49)

Adan's air support, what little he got, was poorly coordinated, and he lacked the time to ensure sufficient tanks and artillery. Furthermore, enemy radio jamming, poor reception due to hills, and higher headquarters flooding his own nets with their traffic caused Adan to reflect "...I was commanding a large formation which, on orders from above, I was compelled to disperse over a broad expanse so that it was difficult to maintain control."(50) Israeli intelligence on Egyptian positions was poor, as well. When he pleaded with his higher headquarters for more close air support and artillery, Adan was told to speed up his attack; "...communication with Southern Command was like a dialogue with the deaf."(51) And finally Sharon, whose division was supposed to hold the "nose" of the penetration, pulled out to venture off on his own counterattack further south, thus exposing Adan's flank.

The biggest problem, however, was the whole question of the mission. Says Adan of his conversation with Gonen, "In a long radio discussion, I tried

to grasp his intentions.... The answer I got was to do all of these (numerous missions) and more...."[52] In point of fact, Adan was conducting a terrain-oriented counterattack, into the face of a defensively strong enemy, all the while thinking he was performing a force-oriented counterattack. Adan states of his plan, "I did not determine specific terrain objectives; the emphasis was on a coordinated advance to search out the enemy and destroy him"[53] (clearly force-oriented), yet later he writes, "The operation was intended to gain the initiative, to slow the Egyptian momentum, and to retake a substantial part of the territory we had evacuated."[54] Adan ran into a defense, not an attacking enemy force, which he had neither the combat power nor the combat intelligence to dislodge. The maneuver and mobility advantages he had hoped to have were cut short by Egyptian antitank missiles. The agility he had expected to have was thwarted by conflicting guidance, fuzzy and changed plans, poor intelligence, aggressive optimism from above, and inadequate command and control. And the "cheng" of the operation, Sharon's division, pulled out, leaving him scrambling for survival in the midst of it all.

* * *

And so ends a historical look at the counterattack, from 331 B.C. until 1973. For the most part the story has been one of agility formed from leadership and mobility. Leadership was fostered by observant commanders, in the right place for controlling their units and making critical, time-sensitive decisions. Mobility, for over 2000 years, came on horseback, although with the advent of accurate, efficient firearms there came a change from a shock-type cavalry counterattack to one in which the horse was a means of quickly moving the firepower of the counterattacker on the battlefield. All of this ended in 1914 with the massive fires of World War I. One might argue that with the horse no longer survivable in combat, it was precisely that absence of mobility which created the trench warfare stalemate.

In World War II the tank emerged to reign on the mobile tactical battlefield. But in a war marked by industrial capacity of incredible proportions, soon all nations were to have their own versions of the tank (though admittedly some employed it more efficiently than others) and the reign was short-lived. Antitank weapons, as well, challenged the mobility differential of armor. Finally, as the Israelis discovered in 1973, the missile completely changed the complexion of land combat.

Thus, one might think, this "counterattack business" is at an end. The survivable force with a mobility-differential may indeed no longer exist. Let us look now at the battlefield of today, as we try to approximate it, to learn some lessons for the future.

B. THE BOARD GAMES

As a means of simulating "modern warfare," the students in the Advanced Military Studies Program at Fort Leavenworth conducted a series of board and computer-enhanced wargames at the level of company through corps. During several of these, as well as one by Major Bob Babicke, various counterattacks were attempted, with varying results.

1. Nutcracker

The "Nutcracker" exercise was a First-Battle, manual simulation of three counterattacks against a 2d echelon Soviet tank regiment which, as part of an attacking motorized rifle division, was traveling in march column. In all three cases the counterattacker was a U.S. force with relatively secure access up to the zone of action on the flank of the tank regiment.

During the first scenario, the counterattack was conducted by an armor-heavy task force; in the second scenario at night by a mechanized infantry task force; and in the third scenario, by a pure aviation force from the Combat Aviation Brigade (CAB). As the action occurred, it became apparent that we were conducting a force-oriented engagement in what might even be called a spoiling attack. The key variable between the scenarios was <u>timing</u>; so critical was timing to these counterattacks that the group named a "conclusion" after the student officer who coined it. Campbell's Corollary was: "All counterattacks are either too early or too late." The armor task force hit the center of the tank regiment, although the intent had been to hit the nose and lead battalions. During the mechanized infantry <u>night</u> counterattack, timing was affected by night cross-country speed factors and enemy mines. In fact, while the intent had been to hit the center of the enemy column, a good portion of the task force never got into the fight before the Soviet regiment passed by. Only in the third engagement, by attack helicopters, was the mobility differential between forces such that proper timing could be performed.

Numerous lessons were obtained during the exercise in addition to the one on timing. The first was <u>intent</u>: even with the availability of the brigade

and division operations orders, the intent was difficult to decipher, particularly since the division commander intended to destroy forces while the brigade commander, because of his use of control measures, appeared to want to seize terrain. Even with the "omniscience" that a board game allows, it was a difficult question for the student planners to resolve. Eventually we executed force-oriented counterattacks.

One of the reasons timing is so important is that it is unlikely, in an "ambush" counterattack, that one can kill everything in his window before the enemy reacts. Consequently, the counterattacker must plan for a short, violent fight in which he brings all possible combat power to bear on the enemy: artillery, close air support, smoke, mines, electronic warfare. Because it is difficult to defeat the enemy force in detail, the counterattacker must decide if he will conduct a simultaneous ambush (all firepower hitting at once) or a sequential engagement in which the counterattacker moves to react as the enemy reacts. In our situation, it was really only the CAB which had the mobility differential to conduct a sequential attack.

Finally, maximum flexibility must be built into the plan to provide the agility required in this type of operation. The easiest way of fostering agility is by having a mobility differential, but it also is achieved through planning, the use of a reserve within the counterattack force, and good intelligence.

2. The DTAC Study

A different simulation was performed by Major Bob Babicke, Department of Tactics, Command and General Staff College in 1985. He took an "approved solution" corps defense in Europe and played it on a computer system called CORBAN (Corps Operational Battle Analyzer). In it the corps defended with two divisions abreast and a separate infantry brigade was retained as the corps reserve. The armored cavalry regiment was attached to one division, and each division controlled its own covering force. The corps was opposed by a combined arms army consisting of five divisions and an independent tank regiment. Major Babicke ran the CORBAN exercise three times, each time using a slightly modified U.S. scheme.

The lessons learned and insights come from Major Babicke's briefing. First, a mobile defense, using agility and initiative, produced far better results than a static defense. Second, main battle area units can be used as

counterattack forces. Third, timing is critical for the counterattack, particularly when planning trigger points and time/distance factors. Fourth, attack helicopters employed deep (behind the first echelon divisions) were very successful, while those employed forward but close-in suffered significant losses from tanks and a more mature air defense network. Fifth, the corps attack of the proper second echelon forces made a significant difference in the close-in battle. And finally, the defense must be "proactive, predictive, and attack enemy weakness."

To all of this I would add but two points. One, board games and computer simulations are force-matched; while advantages for such things as attacking a flank are credited, there is no way to measure such battlefield characteristics as fear, panic, and confusion, which the counterattack generates. Two, the whole business of Soviet echelonment made the counterattack a difficult action to time. Not only did the counterattacker have to judge his plan to ensure he hit the proper target at the proper place and time. He also had to get it done before the next echelon rolled into his flank. Agility is paramount in the counterattack, but perhaps--no matter how good it is--agility is best achieved through a significant mobility differential.

C. THE DOCTRINE

The current FM 100-5, Operations, says all the right things about counterattacks. It has the Clausewitzian flavor, the theoretical construct of a capstone manual, and the proper balance between the offense and defense. The problem is that the "big picture" of the counterattack is not translated down into the subordinate manuals in a manner manifesting ever-increasing detail, as one would expect. Not that these subordinate manuals are wrong; they, too, say all the right things. But they deal in vague generalities which give the reader a "feel" for the business but little else.

The doctrine carried into France by American G.I.'s in WW II was spelled out in the June, 1944 version of FM 100-5, Field Service Regulations: Operations. This manual, relatively specific in style, says more about counterattacks than any of our manuals today. Furthermore, what is written on the subject, for the most part, is covered in one general area, from pages 178 to 193; our current approach is either to cover the main points of a counterattack in a disjointed, spread-around fashion or to focus on generalities. The June, 1944 manual says, for example:

> It may be impractical or inadvisable to direct the main effort of the counterattack against the enemy's mechanized force. A mechanized attack, once launched and initially successful, proceeds with such rapidity that an attempt to direct counter-measures against the mechanized vehicles may result in a direct pursuit rather than an attack.(55)

providing one more argument for a counterattack force with a mobility differential.

The new (final draft) manual FC 1-112 (Attack Helicopter Battalion) might be considered to contain the doctrine for the premier counterattack force on the battlefield. In the chapter on defense, however, it does not discuss the counterattack; it does not discuss the planning requirements (who and what) for a counterattack; and it does not address how the counter-attack fits into either the aviation or the ground commander's plan. In the chapter on offense, the counterattack is only discussed in terms of how the Soviets (Threat) use it. Indeed, the employment of the counterattack by attack helicopter units tends to be submerged in such phrases as: "Successful defensive operations...seize the tactical initiative locally and then generally as the entire force shifts from defense to attack."(56) Similarly, FC 1-111, Combat Aviation Brigade, says, "The covering force should grasp the opportunity to counterattack any time the enemy yields momentum."(57) It sounds good. It sounds like bravado. And unless it is fully understood by those who will execute it, it sounds like the Southern Command on the Sinai in 1973.

## III ANALYSIS

This chapter will discuss the most significant features of a force-oriented counterattack which one ought to know about this business before executing or ordering one. There is no "manual on counterattacks" nor any other similar source document. First is a reexamination what was proposed as the historical constants--those key characteristics of a counterattack which, while they may change in technique through the years, will not change in substance. Second are additional lessons which may be applied to counter-attacks. And third is a discussion of the application of counterattack doctrine to the US Army Combat Aviation Brigade today.

### A. THE CONSTANTS OF HISTORY

1. The first constant of a successful counterattack force is agility, that characteristic of speed and nimbleness which allows a force--in today's

phraseology--to operate inside the enemy's decision cycle (and also inside the enemy's reaction cycle). In one sense, agility is a mental quality enhanced through leadership, training, planning, rehearsals, and a doctrinally common cultural bias. Alexander fostered agility through leading forward, the devotion of his Companion Cavalry, and the training of a professional army which could react instantly to orders. Frederick, as well, achieved agility through discipline and training. The German army of WW I counterattacked with it Stosstruppen, or shock troops, the ablest of its soldiers. And it was the Germans of the Second World War who achieved the ultimate in agility with a tactical doctrine based on mobility, not in spite of it. Embodied in such men as Rommel, Balck, and von Mellenthin, the Wehrmacht agility was achieved through leadership forward, mission-type orders, syncronization through the execution of a common doctrine, and trained staffs evolved through the German General Staff system.(1)

But mental agility may not provide a defender enough of an edge over his foe to counterattack. Thus the physical ingredient of agility--a mobility differential--is almost always found in the counterattack force. This mobility differential is the legacy of the earliest cavalry--on horseback and chariot--and while the styles and techniques of warfare changed, the horse was the second tier of mobility on the battlefield...until 1914. During the Great War, firepower, evidenced by the machine gun and massive artillery, was so fierce that the horse simply and abruptly ceased to exist as a means of combat locomotion.

Mechanization provided a new challenge and a new means of agility to the armies of the Second World War. In point of fact, the armies who used tanks and other mechanized vehicles gained a mobility advantage as much from how they employed them as from how many they possessed. And now, as General von Senger has pointed out, there really is no mobility differential on the European battlefield today, unless one looks to aviation. The dilemma of the counterattack, stated perhaps a bit more precisely than "Campbell's Corollary", was best summarized by Ferdinand Miksche in 1942:

> Initiative and speed enable the attacker to concentrate so swiftly, and to shift his local superiority so swiftly, that unless the counter to his move is made by forces moving equally swiftly, this counter-move is bound to reach the decisive area too late.(2)

2. The second constant of counterattacks is timing, properly executed through agility in order to capitalize upon an enemy weakness. Alexander, Frederick, Wellington, and Balck all achieved timing through leading forward--or at least being where they could see. In the words of the latter, "The secret of modern armor leadership is that everything has to happen in the blink of an eye. That can only be accomplished if the commander is right at the point of action...."(3) Gonen was not.

3. The third and very critical constant of counterattacks is that they must--with the single exception of desperation moves--capitalize upon some vulnerability on the part of the enemy resulting from his attack posture. Some vulnerabilities are inherent in the attack, some result from an attacker's error, and some--like Hannibal at Cannae--are induced by the defender. But unless the counter-attacker calculates this vulnerability he merely has a hasty attack.

In the first place, given a correct analysis, the enemy main attack has been discovered, something heretofore undetermined. Second, the enemy attacker has "...just undergone a baptism of fire..." in which his command and control has been disrupted, his combat power has been diminished, and his initiative has been challenged.(4) Additionally the defender has the advantage of terrain which he can "study, prepare, and improve,"(5) while the attacker proceeds ever-deeper into unfamiliar territory. A counterattack may expose the enemy's flank or rear which will make it difficult for him to react, capitalize on the counterattacker's direct fire systems, and create a psychological shock.(6) In the latter case, says General Balck, the Russians "...are a kind of herd animal, and if you can once create panic in some portion of the herd it spreads very rapidly and leads to a major collapse. But the things that cause that panic are unknowable."(7) It would appear that an ambush counterattack capitalizing upon surprise would thus be most effective.

Most sources which mention the counterattack suggest that it should be executed just at that point when the enemy, weakened and exhausted, loses his momentum--his offensive culminating point. The problem is that this point is extremely difficult to identify, even after the fact. The potential counterattacker ought to consider, though, the enemy's pace, his artillery support (and whether he is outrunning it, as in WW I), and the enemy's ammuniton situation. The technique in WW II was to counterattack to separate the attacker's infantry from his tanks, thus making him vulnerable to antitank weapons fire.

The enemy may, by miscalculation, expose a part of his force which he cannot support if counterattacked, as did Marmont at Salamanca; create gaps in his formations, as did Darius at Arbela; or expose his flanks as did Soubise at Rossbach. In the latter case, the enemy had been lured into a counterattack. Said one nineteenth century historian, a General Dufour,

> After an engagement, the enemy may be drawn into an ambuscade by a feigned retreat. This ruse is well known, but it still succeeds, because an enemy who believes himself victorious, and wishes to profit by his success, does not always take all the precautions usual in an ordinary march; and, moreover, people are made presumptuous by good fortune.(8)

Finally, there is an analysis of the Soviet soldier by General von Mellenthin. "Russian tactics are a queer mixture; in spite of their brilliance at infiltration and their exceptional mastery of field fortifications, yet the rigidity of Russian attacks was almost proverbial."(9) He goes on to suggest that much of what he saw in WW II of the Russian is still true today: repeated attacks in the same place, inflexible artillery, attacks on predictable terrain, few independent decisions at the lower levels, and "...a total lack of imagination and mental mobility."(10) Somewhat strong, to be sure, but a weakness which at least should be considered.

4. The fourth constant, intertwined within the context of a mobility differential, is the concept of the cheng and the ch'i, the static (terrain-oriented) and dynamic (enemy-oriented) elements of defense.(11) Says one military author in the book On Infantry, "If history tells us anything, it is this: the most successful defense is one in depth that incorporates a blend of static and mobile resistance."(12) In the simplest sense, it is the infantry--the light infantry--which, occupying strong points, "...defends these areas of rugged terrain so that they can become the fulcrum for defensive maneuver and counter-attack."(13) In a more complex sense, it is the armored and mechanized forces which comprise cheng, and aviation is the ch'i. Perhaps, indeed, there are three tiers of mobility: light infantry, mechanized forces, and combat aviation.

B. SOME POINTS TO PONDER

In addition to the constants, there are a host of issues about the counterattack warranting some rumination. The first of these is the decision on when to counterattack. On the one hand, there is much to be gained, provided one does not confuse one's own staff, by repeated counterattacks which

keep the enemy off balance. Says von Mellenthin, "Mobile defense, which unexpectedly confronts the Russian constantly with new situations, confuses him and disrupts his concept."(14) It is probably more appropriate to weigh the counterattack decision on the factors of METT-T: mission, enemy, own troops, terrain, and time. It sounds simple, yet it is precisely what is often overlooked in the counterattack decision. Unfortunately it is impossible to measure the intangible, psychological advantages of a counterattacker. Sometimes, like von Mellenthin's counsel on Soviet bridgeheads, there is no choice, so the effect on what will happen if the enemy is not counterattacked must be considered. But, as the US Army Infantry School stated in 1949,

> First, let us dispose of a dangerous and all too prevalent impression--that an immediate counterattack is always the sure-fire, all out, all purpose SOP solution to an enemy penetration. A penetration is not an automatic signal for a counterattack."(15)

The author then continues to offer what is the "bottom line": the counter-attack decision is based on the likelihood of success or failure. "When the commander believes that the counterattack will succeed, then the answer is obvious."(16) The only caveat is that the commander must also consider the plan of his higher commander to ensure that his action is in accordance with the bigger plan.

The second question is whether to counterattack the flank or the nose of an enemy penetration. Again, there is no clear cut solution. A weak defending force may have little alternative but to hit the nose. The key considerations are the terrain in the area (and avenues of approach), the location of the friendly reserves, the simplicity of the maneuver, the enemy force, the security of the shoulders held by the defender, the depth of the breakthrough, the time it will take to get to the flanks, and the effect of enemy air superiority.(17) The Soviet Army newspaper Red Star, in 1943, stressed in their attack "...widening the flank and consolidating the corridor created by the breakthrough of enemy positions."(18) Having suffered greatly from German counterattacks, particularly from the flanks, the Russians learned in a breakthrough that "...maximum flank security must be the prime consideration," and suggested going no deeper until the ratio of the width to the depth was at least 1:2.(19)

One post-WW II analysis of Russian penetrations suggested that the most effective countermeasure was the use of two defensive pincers whenever

possible rather than one flank attack to which the enemy could more easily react.(20) A more recent Soviet author, as well, emphasizes the tremendous value in surprise gained by attacking an enemy penetration from several directions.(21) It is worth considering the fact that, as the Russian is somewhat of a self-professed expert at the meeting engagement, the odds might not be in our favor in that sort of situation were we to hit the nose of a breakthrough. Furthermore, the Russian army got quite good, in WW II, at learning how to cover its flank, or shoulders, during a penetration, especially with mines. Perhaps, then, one should counterattack the flank but, as one US officer suggests, we should consider "...a flank not in relation to the physical disposition of a force but, rather, as any direction toward which an opponent is not psychologically oriented."(22)

A third consideration in the counterattack is the issue of Soviet echelonment which, as suggested earlier, may be the single most significant change on the battlefield today. Board games and computer exercises routinely result in a second echelon "ramming" into the flank of a counterattacker. FM 71-100 states, "Counterattacking forces must complete their tasks and regain covered positions before overwatching or following enemy echelons can interfere."(23) The IPB (Intelligence Preparation of the Battlefield) process must include an analysis of closure rates of second echelon forces vis-a-vis a friendly counterattack, through data processing or otherwise. Furthermore, flank security for the counterattacker becomes paramount. Finally, again, a true mobility differential becomes increasingly important.

Next is the issue of the force versus terrain oriented counterattack. We often use operations graphics which suggest that the intent of a counter-attack is to regain lost ground, because it is easier to place a "goose-egg" on a map than a proposed enemy location. There is nothing wrong with a terrain-oriented counterattack, if that is what is desired. But a terrain-oriented counterattack turns into a hasty attack very quickly, and a whole new set of force parameters are generated. A force-oriented counterattack is based on annihilation, not ground. The results of confusion on this difference were seen on the Sinai in 1973. It is paramount, therefore, that the counterattacker fully understands his own commander's intent; in most cases, he should comfortably comprehend the intent two levels up.

A fifth problem of counterattack execution is one mentioned by Colonel Wes Clark from his experience at the National Training Center. Very often, he states, a friendly (US) unit simply doesn't realize that it has been penetrated. If this problem exists in a desert environment, smoke and dust not withstanding, imagine the confusion in more varied terrain, like Europe. We seem to underestimate the difficulty of the counterattack, he says. Two factors are related to Colonel Clark's observation. First, the reserve/counter-attack force must be tied-in to the rear battle command net, whatever that may turn out to be, so that it can find a penetration. Second, as one proceeds into a force-oriented counterattack, particularly one which strikes a penetration, the significance of a mobility differential becomes all the more acute. Otherwise, particularly at the lower levels, a terrain-oriented counterattack may be all that is possible, and then, as Colonel Clark states, only if the enemy stops.

The last issue, warranting further study, is the question of dimension, for it appears that there may be some upper limit in size for which a successful counterattack may not be possible. Certainly the results of the SAMS board games suggested that as counterattacks grew larger (US corps vs. Soviet front compared to US brigade vs. Soviet division) the results became less decisive. The WW II analysis of Soviet penetrations, previously mentioned, states,

> A breakthrough on a very wide frontage by overwhelmingly superior armor cannot be eliminated by a flank attack even though strong tank forces may be available to the defender, because the attacker usually protects his interior flanks with adequate armor and antitank gun fronts. But even if the flank attack should surmount this obstacle, the attacker still has sufficient time to shift strong tank units from his main effort to the threatened interior flank in order to eliminate the danger.(24)

The crux of the issue is that a very large force conducting a penetration has the advantages of interior lines. If that is the case, the success of a counterattack from but one direction appears unlikely.

C. APPLICATION TO ARMY AVIATION

That the helicopter is the successor to the tank (and the horse before it) is not an original notion. Says one army officer, in concluding a thesis on air mechanization, "As the parallels are drawn it becomes readily apparent

that the tank and helicopter are but two sequential phases in the advancing stages of mobility and are inseparably linked to the ground battle.(25) The cavalry of the armies of the world has historically been that force with a significant mobility differential, and it is precisely for that reason that the cavalry has historically been the counterattack force. The tank, to be sure, replaced the cavalry in that role in WW II, but mechanization and the proliferation of firepower became so wide spread that (then) Colonel Melvin Zais was led to complain in 1953, "The armored division is as unwieldy as a ten-pound hammer with a forty-foot handle--somewhat difficult to wield."(26) A year later, in 1954, the future Chief of Staff of the Army, Major General James Gavin, wrote, "Today, even the most casual awareness of the historical lesson should suggest that in ground combat the mobility differential we lack will be found in the air vehicle."(27) Secretary of Defense McNamara would later testify before the US Congress that the 1962 Howze Board's air cavalry combat brigade,

> would perform a role much like the horse cavalry of earlier years. Because of its great mobility, it would be very useful for attacks on the flanks or rear areas of the enemy. It would also be highly effective against armored penetrations as it would have large numbers of antitank weapons, including missiles mounted on the helicopters.(28)

While the cavalry has, through time, provided a significant service as the reconnaissance force for which it is best known, its historical contribution to battle has been as a <u>combat</u> force. Thus wrote Major General (then Lieutenant Colonel) David Palmer in 1969, "It is every bit as absurd to imagine the trooper in Vietnam without a helicopter as, say the old time Indian fighting cavalryman without a horse."(29) But the Army of Excellence cavalry today is once again facing extinction, for it lacks the significant firepower to continue as a combat force and it lacks the mobility differential required of a reconnaissance force.

The point of all this is that in order to know where you are going, it is often necessary to know where you have been. Where the counterattack has been is on the back of the horse and inside the turret of a tank. Where it is going is inside the cockpit of an attack helicopter, whatever kind of aircraft that might become. The means is there, when FM 100-5 says, "A force conducting a mobile defense must have mobility that is greater than or equal to the enemy's."(30)

It is important, then, to put the attack helicopter and the counter-attack in the proper perspective. Speaking of attack helicopters, FC 1-112 (final draft) states, "The objective of AHB (Attack Helicopter Battalion) operations is the destruction of opposing armor and mechanized forces...(and)... the primary mission...is to destroy or disrupt massed enemy armor and mechanized forces...."(31) Furthmore, as one Army War College study states "...it is almost imperative that the target be a moving target. To attack a stationary target in defensive positions is not an efficient use of attack helicopter assets."(32) The attack helicopter, then, is clearly a destruction (annihilation) weapon system ideal for the force-oriented counterattack. Its lack of equal contribution to the terrain-oriented counterattack should be obvious.

One of the variant issues of the role of aviation in the counterattack is the whole current question of aviation as a maneuver force. Alexander would hardly have called his Companion Cavalry anything but a maneuver force, and likewise Seydlitz's cavalry under Frederick. But for some reason there persists today an uncertainty on this issue. There is far more to the matter than simple pride for the aviation officer; the issue at hand is a force which ought to have the requisite leadership and staffing to plan, coordinate, and execute those missions calling for the greatest mobility and agility on the battlefield today. Part of the issue of this multi-tiered mobility is the establishment of a headquarters which can control the confusion of the battlefield; in the words of General Bruce Clarke, "The person who wins is the person who keeps the disorganization from becoming disorganized."(33)

It is important, furthermore, to be careful not to handicap a superior mobility by stifling agility. It seems senseless, indeed, to have a combat vehicle with a mobility of 100 miles per hour directed by a leader or staff, aviators or not, capable of thinking or moving at far less. In the same light, the command and control system must provide for an equal degree of agility. And so combat aviation leaders must ever focus on enhancing the agility of their organizations, through both equipment and technique, in order to gain the most advantages from the mobility they already possess.

A different issue is the air defense threat. The Soviets have already suggested that as the best system to defeat a tank is another tank, so the best system to defeat a helicopter is another helicopter. Their production schedules

make that doctrine clear. And so, as the Soviets of WW II finally learned that they had to protect the flanks of their penetrations with tanks, mines, and AT weapons, might we not expect them today to guard those flanks with air defense systems and anti-air helicopters? The implication, then, is that this most mobile counterattack force--aviation--must have a degree of protection which will both travel with the formation and permit mission accomplishment. Such factors as a helicopter-mounted Stinger, a radar-laser warning receiver, chaff, flares, and even an Air Force CAP (Combat Air Patrol) immediately come to mind. Combat helicopters must be accompanied by combined arms assets of equal mobility.

Next, the ground (division) commander must realize the difference in mission between a counterattack (destruction) force, aviation or otherwise, on the one hand, and a "plugger" or blocking (attrition) force, in the tradition of the WW II tank destroyers, on the other hand. Once the blocking force is committed, it is no longer available as a mobile counterattack force. Even in WW II with tank destroyers that were not tanks, they looked just enough like tanks so they often got used as tanks. The attack helicopters all look alike in that regard, so the commander must truly analyze the mission of the force. If he wants to preserve his counterattack force, he might need the iron will and nerves of a Balck. Perhaps that is why the Soviets have an antitank reserve and a tank reserve--one to plug and one for decisive commitment.

The final issue for aviation in the counterattack involves the simultaneous employment of aviation and armor/mechanized forces under one headquarters. There should be no problem, provided the ground maneuver force has enough mobility to get at the enemy force when operating in conjunction with aviation. Indeed, it is the ground force which must assault and close with the enemy, if necessary, the employment of air assault troops notwithstanding. As Richard Simpkin states, "Even if the defense is based on the hammer-and-anvil tactic, there is a need to get enough of the anvil in place to hold the attacker until the rest of the anvil and the hammer arrive."(34) The question of who holds the "bag" and who hits the flank, when ground and aviation forces counterattack together, is not set in doctrine. It depends on the plan. Likewise, aviation cannot work in isolation no matter how efficient it might become. As the ch'i must work with the cheng, we must realize, as Major Carlton Hood reminds us, that,

> ...the attack/assault helicopter is not a panacea for defeating a sophisticated enemy force which possesses an overwhelming superiority in battlefield systems, firepower, and manpower. No single system is capable of defeating, or even neutralizing, the Warsaw Pact threat in Central Europe. That task requires the synergistic effect of combined arms employed at the decisive time and place.(35)

## IV CONCLUSION

### A. THE HISTORICAL CONSTANTS

It is appropriate here to summarize the constants which history and analysis have demonstrated in the force-oriented counterattack. Simple as they sound, it is nonetheless the inability of some tacticians to grasp them that leads to failure. First, the counterattack must be based--indeed, aimed--at some weakness or vulnerability on the part of the attacker. Otherwise, the deed is but a hasty attack for which the "correlation of forces" may not be favorable. Second, timing is a critical ingredient to the counterattack; all the tools available must be employed to foster it, for the enemy will not yield the initiative easily. Third, a counterattack force does not work in isolation. It must function in conjunction with and in relation to all of the other friendly forces on the battlefield, each with its own clearly defined role, as the cheng and the ch'i. And last, all of these constants are related to--and achieved by--agility, the key component of which is mobility.

### B. THE DEFENSE

Unless a nation at war plans to initiate hostilities and ever retain the initiative through a continued offensive, it must at some point maintain a defensive posture. While this study is not a treatise on schemes of defense, it is nonetheless evident that the counterattack is a primary factor in practically all of them. Almost every defending commander, as did de Saxe and von Mellenthin,

> ...fully realizes and appreciates that no matter how strong, how well-planned, and how well-organized his defensive position may be, the attacker--willing to pay the price in men, material, and time--can penetrate his position; therefore, the commander must plan for every contingency.(1)

It is neither the intent nor the focus of this paper to question the virtue of a positional forward defense such as NATO employs in Europe today. That issue is a political one far outside the scope of this work. But while

a mobile defense is a relative thing, its key feature is the destruction of enemy forces, not the retention of terrain. Says von Mellenthin,

> ...the history of armored warfare--and of cavalry warfare before that--shows that the great prizes can only be won by speed, daring, and maneuver. The "play safe" school of generals was very well on the Western Front in 1914-18, but it is out of place in this age of the gasoline engine and the airplane.(2)

Indeed, in the next war there may be no forward defense, though if there were, the availability of a mobile counterattack force would be paramount because penetration would be inevitable. The next war may be in the desert where retention of terrain is largely dictated by tactical and operational necessities, similar to the steppes and tundra of western Russia. In that campaign the Germans were successful, early-on, largely because they "...recognized the inevitability of a nonlinear battlefield, and this conceptual understanding resulted in a willingness to accept significant penetration when defending."(3) Some will say that it was only after Hitler became resolute in holding key features like cities that the German defenses began to waver. That case notwithstanding, it is important to keep pace with one's adversary; according to Simpkin, "...the Russians emerge as the most fanatical of all modern apostles of mobility."(4)

C. FROM HORSE TO ROTOR

Finally, it is important to appreciate, within the context of the counterattack, that army aviation today is the successor to the tank and horse cavalry of yesterday. It is vital that the inherent mobility of aviation be matched by an equal degree of agility--through leadership, training, and an efficient command and control structure. Otherwise, as armor leaders learned long ago, the pace of the unit is dictated by the slowest tank.

One should not diminish the significance of the mobility differential achieved by such modern systems as the M-1 tank and the M-2 Infantry Fighting Vehicle. The speed which these vehicles bring to the battlefield is important and must be employed in conjunction with aviation. Indeed, some theorists are calling for a whole new focus on heavily-armed, high-speed light attack vehicles. But it is army aviation which produces an order of magnitude increase in mobility.

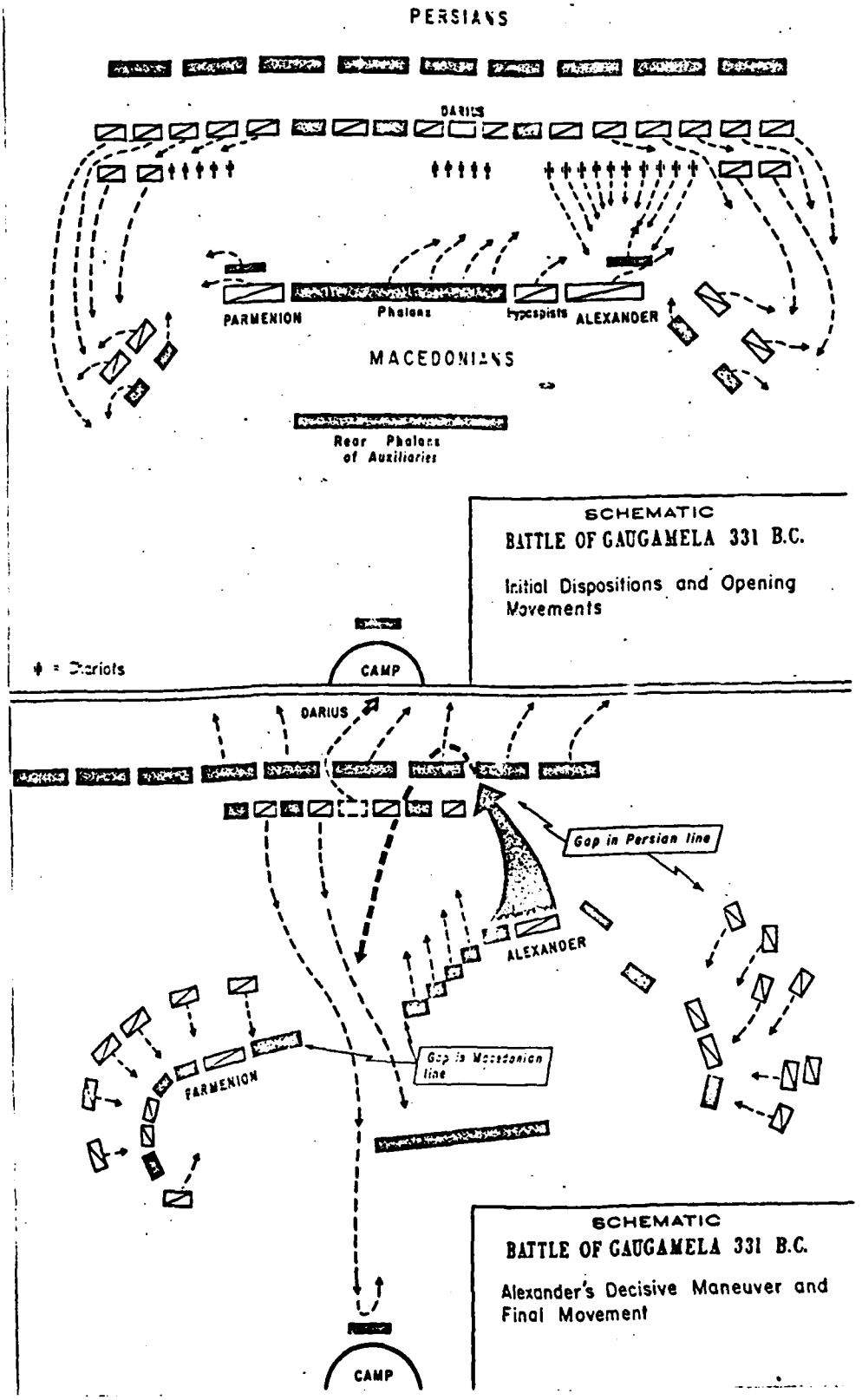
The aviation counterattack force can come in many varieties--like the CAB of today or like von Senger's and Simpkin's airmechanized forces of the future; in the AH-1's and AH-64's of the present or in von Senger's Main Battle Air Vehicle yet to come. It must expect to operate in conjunction with ground forces, as well--a hammer and anvil or cheng and ch'i. Furthermore, the mobility and agility of aviation has its price: "For an order (of magnitude) of operational mobility you pay an order of endurance."(5) But that mobility differential has been, and will continue to be, key on the battlefield. From all of this, it is evident that the sword of vengeance will be forged from army aviation.

* * *

As a final thought, I confess that all of this discussion on the "counterattack business" appears unembellished to an eye seeking only hard, fast, and practical answers. But this paper is fundamentally an endeavor on how to <u>think</u> about counterattacks. And so I close with Clausewitz who, in describing the friction of battle, said,

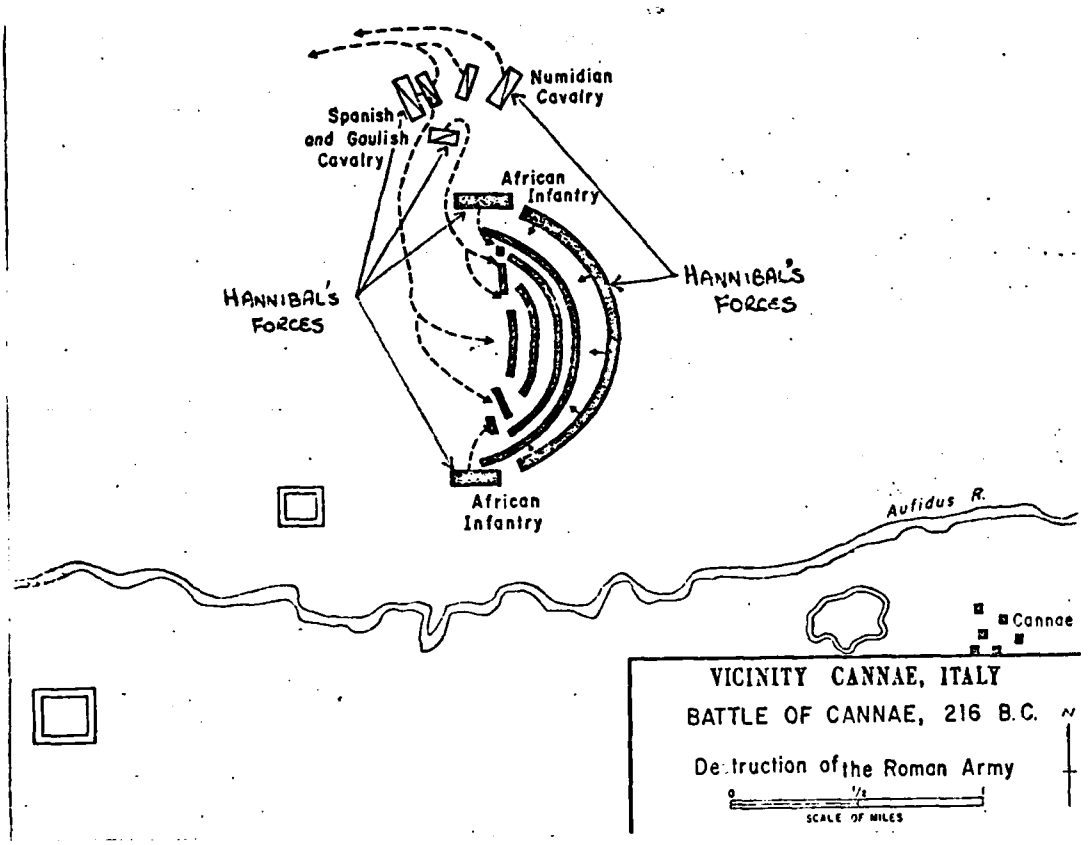
> Everything in war is very simple, but the simplest thing is difficult.(6)

MAP A



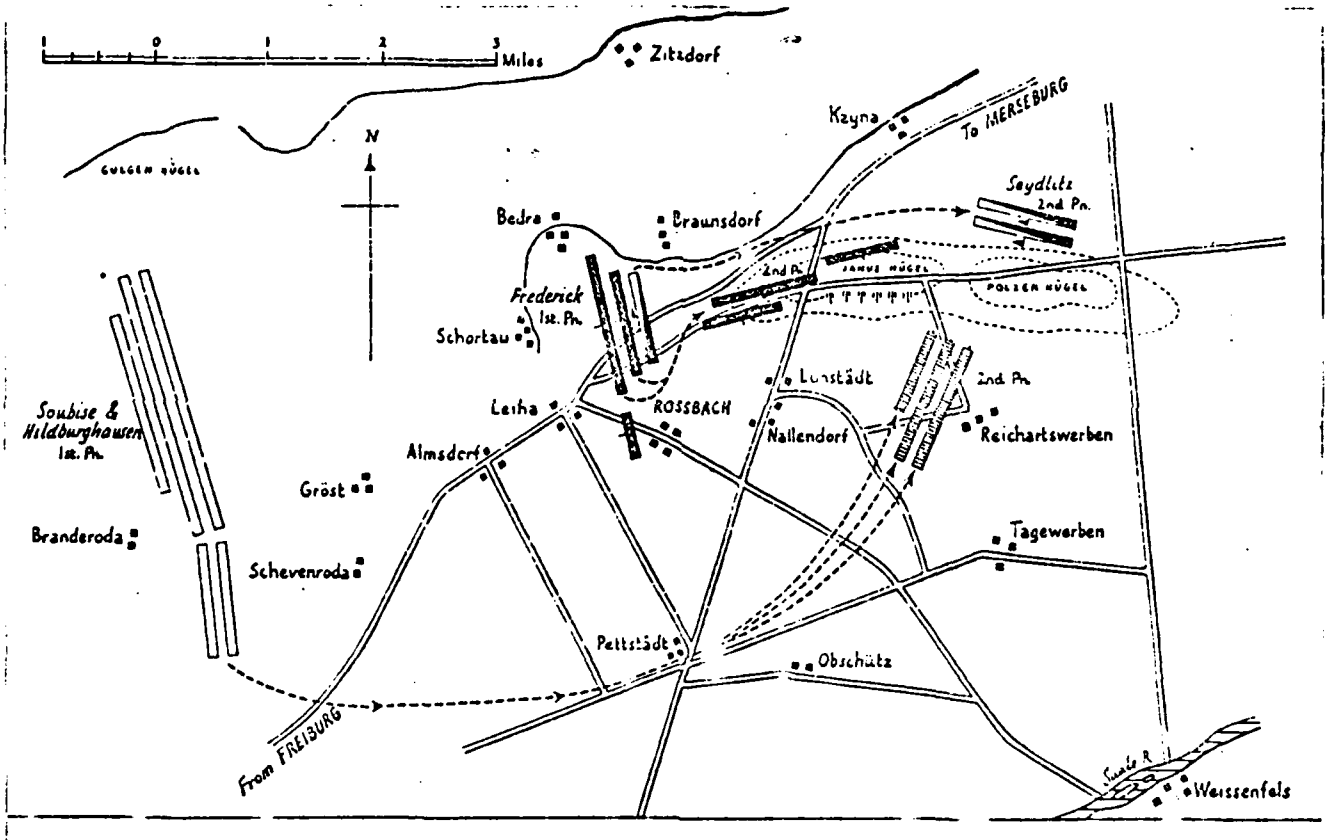

Source: Notes for the Course in the History of the Military Art, page 4-11.

MAP B




Source: Notes from the Course in the History of the Military Art, page 4-15.

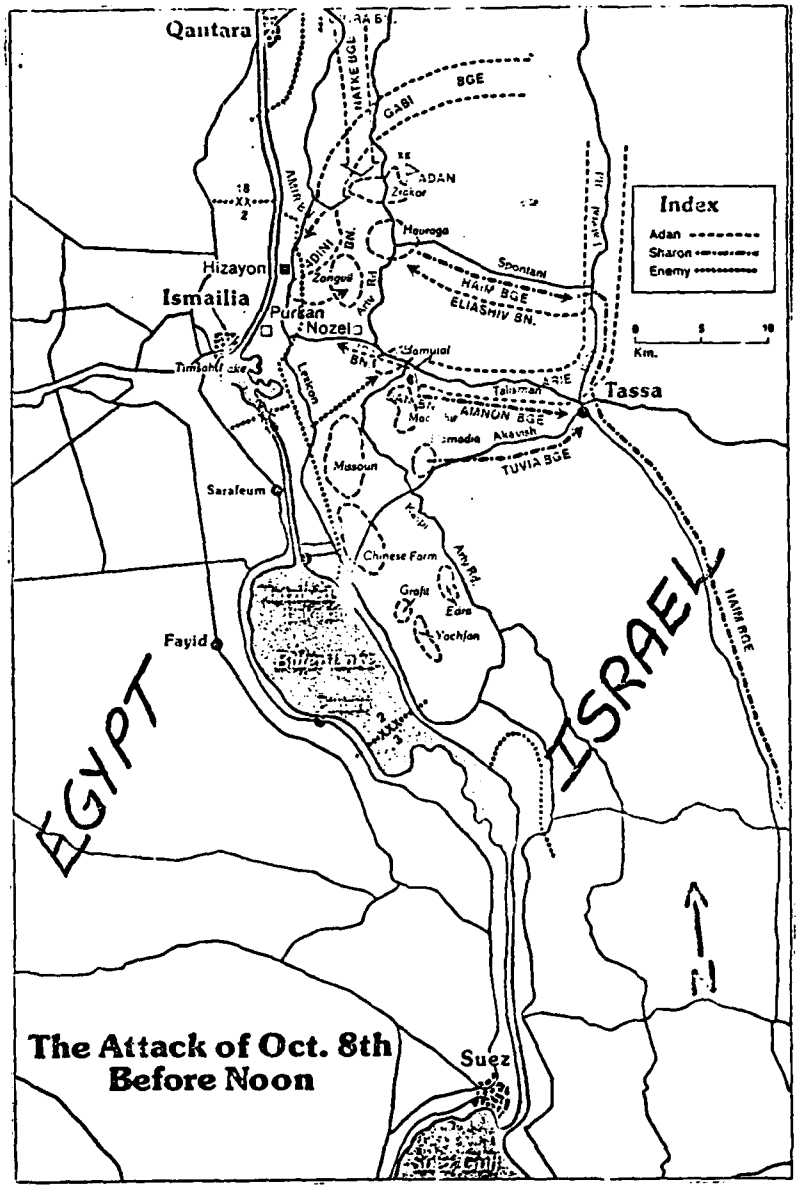
MAP C




12. BATTLE OF ROSSBACH, 1757

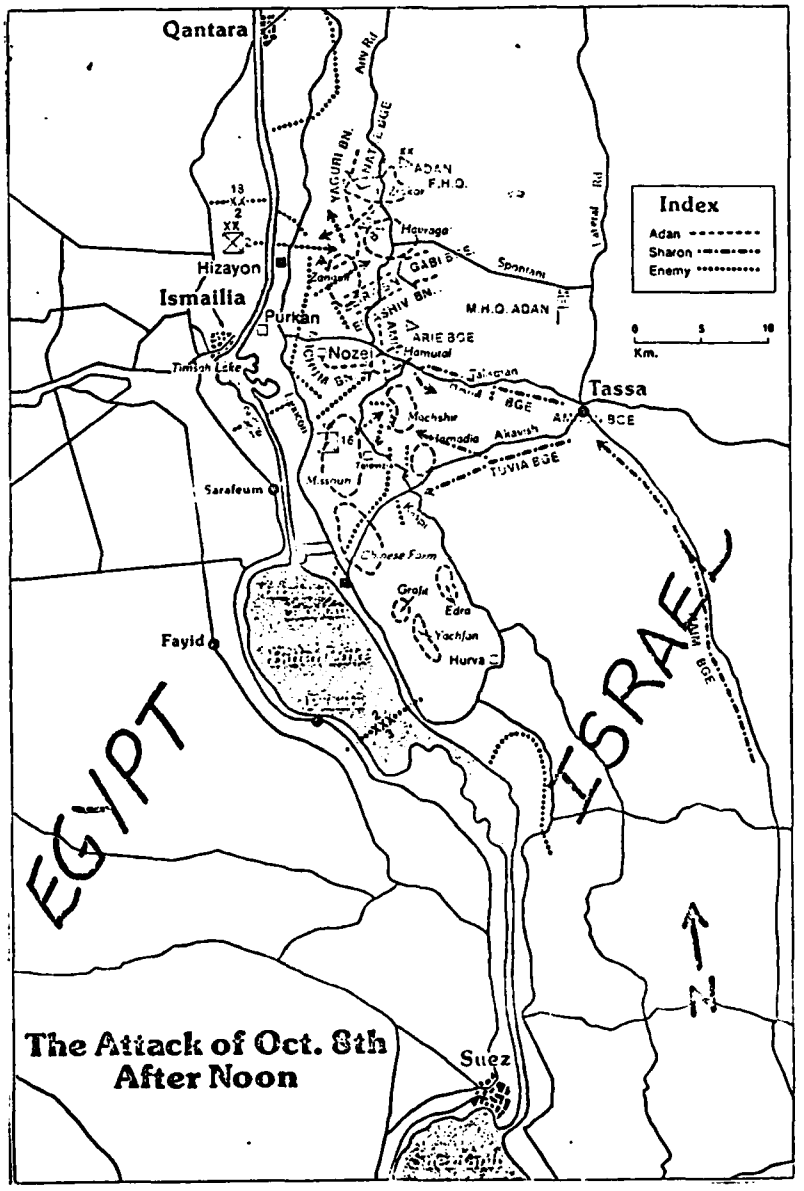
Source: A Military History of the Western World, page 204.

MAP F




Source: On the Banks of the Suez.

MAP G




Source: On the Banks of the Suez.

ENDNOTES

SECTION I.

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[2]U.S. Department of the Army, Operations, Field Manual 100-5 (draft) (Fort Leavenworth, KS: USACGSC, July 1985), p. 8-7.

[3]BVT MAJ Harold G. Eady, Historical Illustrations to Field Service Regulations, Vol II (London: Sifton Praed and Co., Ltd., 1926), p. 165.

[4]Ibid., p. 198.

[5]Translation of Taped Conversation with General Herman Balck, 12 January 1979 and 13 April 1979. Prepared by Battelle Columbus Laboratories, Columbus, Ohio, 1979, p. 16.

[6]Robert A. Doughty, The Evolution of U.S. Army Tactical Doctrine, 1946-76. Leavenworth Paper Series. (Fort Leavenworth, KS: Combat Studies Institute (CSI), U.S. Army Command and General Staff College (USACGSC), 1979), pp. 21-25.

[7]Ibid., p. 29.

[8]FM 100-5. p. 7-23.

[9]B.G. Dale O. Smith, U.S. Military Doctrine (New York: Duell, Sloan, and Pearch, 1955), p. 165.

[10]FM 100-5. p. 2-14.

[11]COL Creighton W. Abrams, "Mobility vs. Firepower," 1953. Published in The Art of War Quarterly, Volume III as a U.S. Army War College Art of War Colloquium, 1984, p. 113.

[12]Richard E. Simpkin, Red Armour, An Examination of the Soviet Mobile Force Concept (New York: Brassey's Defence Publishers, 1984), p. 94. Simpkin is referred to as one of the current "apostles of mobility" and a proponent of air mechanization.

[13]FM 100-5. p. 2-14.

[14]Sun Tzu, The Art of War. Translated by Samuel B. Griffith. (London: Oxford University Press, 1971), pp. 34-42.

[15]Generals Balck and von Mellenthin on Tactics: Implications for NATO Military Doctrine." Unpublished report for OSD by the BDM Corp, McLean, VA., 1980, p. 46.

[16]LTG Ferdinand M. von Senger und Etterlin, Closing remarks to a U.S. Army War College Symposium, 3 May 1985. (Listed as USAWC tape #18), p. 2. General von Senger is also an "apostle of mobility" and a proponent of air mechanization.

[17]General von Senger does not address the role of light infantry, a resurging force in the U.S. Army. Thus to him all forces are motorized/ mechanized and aviation provides a new second tier of mobility. It would probably be more accurate to include light (foot) infantry in his paradigm. In that case, aviation would become a third tier of mobility.

[18]Richard Simpkin, Tank Warfare, An Analysis of Soviet and NATO Tank Philosophy (London: Brasseys Publishers, Ltd., 1979), p. 15.

[19]Norman MacMillan, The Chosen Instrument (London: Unwin Brothers, Ltd., 1938), p. 48.

[20]Roger A. Leonard (ed.), A Short Guide to Clausewitz (New York: Capricorn Books, 1968), p. 196.

[21]Ibid., p. 193.

[22]Carl von Clausewitz, On War Edited and translated by Michael Howard and Peter Paret. (Princeton, NJ.: Princeton University Press, 1984), p. 360.

[23]Leonard, p. 33.

[24]Clausewitz, p. 524.

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[7]Ibid.

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[10]Marmont was anxious to end the Peninsular Wars which were Napoleon's "bleeding ulcer." He therefore was overly concerned that Wellington would deny him battle. As a result his aggressiveness caused him to attack prematurely, creating a gap in his lines which Wellington was to exploit. This situation, the counterattack against the errors of an overly aggressive and confident attacker, will be seen throughout history.

[11]Eady, p. 198.

[12]Ibid., p. 163.

[13]MAJ John A. Bonin, "Combat Copter Cavalry: A Study in Conceptual Confusion and Inter-Service Misunderstanding in the Exploitation of Armed Helicopters as Cavalry in the U.S. Army, 1950-1965" (Unpublished Master's Thesis, Duke University, 1982), p. 17.

[14]Ibid., p. 24.

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[30]Ibid., Issue #18, p. 3.

[31]Ibid., Issue #27, p. 21.

[32]Generalmajor F.W. von Mellenthin, The 48 Panzerkorps, November 1942 to July, 1944 (Carlisle Barracks, PA: U.S. Army War College, 1983), p. 78. Reprinted in U.S. Army War College Art of War Colloquium.

[33]Ibid., p. 81.

[34]Ibid., p. 94.

[35]Ibid., p. 85.

[36]Nonetheless, Balck always left his division main command post far enough to the rear so it never had to displace during an operation. As a result he and his subordinates always had continuous communications with that element.

[37]Ibid., p. 84.

[38]"Generals Balck and von Mellenthin on Tactics: Implications for NATO Military Doctrine," p. 10.

[39]Ibid., p. 45.

[40]U.S. Department of the Army, German Defense Tactics Against Russian Breakthroughs, DA Pamphlet 20-233, October, 1951. Reprinted as a U.S. Army Art of War Colloquium Selected German Army Operations on the Eastern Front, Vol IV, 1983 (Carlisle Barracks, PA: U.S. Army War College, 1983), p. 9.

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